

### **REMARKS/ARGUMENTS**

Claims 1-30 are pending in the present application.

This Amendment is in response to the Office Action mailed June 16, 2008. In the Office Action, the Examiner rejected claims 1-6, 14-19, and 27-30 under 35 U.S.C. §102(e); claims 7, 12-13, 20, and 25-26 under 35 U.S.C. §103(a); and claims 8-11 under 35 U.S.C. §103(a). Applicant has amended claims 1, 4, 5, 6, 14, 18, 19, 27, and 29. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

#### ***Rejection Under 35 U.S.C. § 101***

Claims 14-26 and 27-30 are rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter.

##### **1. Claims 14-26**

Regarding claims 14-26, the Examiner alleges that the limitation of “a machine-accessible medium including data that, when accessed by a machine” includes fiber optic medium and RF link such that it is non-statutory. Applicant respectfully disagrees. However, in the interest of expediting the prosecution of the application, Applicant has amended claim 14 to recite “a machine-accessible storage medium having stored thereon ~~including~~ data that, when accessed by a machine” to address the Examiner’s rejection.

In addition, the specification provides for alternative means. The “processor readable or accessible medium” or “machine readable or accessible medium” may include any medium that can store, transmit, or transfer information. Paragraph [0059] recites:

“The “processor readable or accessible medium” or “machine readable or accessible medium” may include any medium that can store, transmit, or transfer information” (See Specification, par. [0059]). *Emphasis Added.*

Since there are alternative means (e.g., store, transmit, or transfer information), Applicant may elect to claim any one of them. Claim 14 recites “a machine-accessible storage medium” which clearly embodies a storage medium, and not just any medium. A storage medium is clearly statutory. Several examples of a storage medium are provided in the specification such as an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash

memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk (Specification, paragraph [0059]). Thus, claims 14-26 are directed to statutory subject matter.

Applicant respectfully submits that this amendment overcomes the Examiner's 35 U.S.C. § 101 rejection and respectfully requests that the Examiner remove this ground for rejection.

## 2. Claims 27-30

Regarding claims 27-30, the Examiner alleges that claim 27 directs a description on a system of grouping that is directed a conceptual description without statutory subject, i.e. a process, machine, manufacture or composition under § 101. Applicant respectfully disagrees. According to Interim Guidelines for Examination of Patent Applications for Subject Matter Eligibility ("Guidelines"), claims 27-30 are statutory under 35 U.S.C. §101.

A claimed process is statutory if it is limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting *Diamond v. Diehr*, 450 U.S. at 192, 209 USPQ at 10). See also *Alappat* 33 F.3d at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat patentability of its practical applications") (citing *O'Reilly v. Morse*, 56 U.S. (15 How.) at 114-19). A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful. See *AT&T*, 172 F.3d at 1358, 50 USPQ2d at 1452. MPEP 2106 IV.B.2.

The Guidelines states: To satisfy section 101 requirements, the claim must be for a practical application of the § 101 judicial exception, which can be identified in various ways: (1) The claimed invention "transforms" an article or physical object to a different state or thing; (2) The claimed invention otherwise produces a useful, concrete and tangible result, based on the factors discussed below.

Applicant submits that the claimed invention transforms an article or physical object to a different state or thing, or alternatively, produces a useful, concrete, and tangible result.

### a) Physical Transformation

Claims 27-30 recite, among other things: "(1) a well-known ad-hoc group (WKG) for impromptu interactions among unrelated mobile users, the WKG having a WKG network

configuration and a set of WKG interaction protocols; and (2) a session-based ad-hoc group (SBG) within the WKG to allow a user to interact with other mobile users, the SBG having SBG network configuration and a set of SBG interaction protocols, the SBG advertising information pertaining to the SBG on the WKG.”

A WKG represents a physical area that corresponds to the radio range of devices (See Specification, par. [018], for further details). Since the devices in a WKG create a SBG (see Specification, par. [019] for further details), the SBG is also a physical area that corresponds to the radio range of devices that are used to create the SBG. In addition, mobile users represent users or physical entities. Accordingly, a WKG, a SBG, and mobile users are all physical entities. All of these are physical objects, not abstract ideas like democracy, freedom, or capitalism.

Furthermore, “impromptu interactions” represent a transformation that allows users to interact or communicate; “allow a user to interact” represents a transformation that enable a user to communicate with other users; and “advertising information” represents a transformation to broadcast or transmit the information pertaining to the SBG on the WKG. Since all three operations (impromptu interactions, allow a user to interact, and advertising information) represent physical transformations of physical entities (WKG, SBG, mobile users, etc...) or reduction of the group of unrelated mobile users to a different state or thing (e.g. enabling interactions), the claimed invention satisfies the physical transformation requirement. Thus, the claimed invention is statutory.

**b) Useful, Concrete, and Tangible Result**

In determining whether the claim is for a “practical application,” the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is “useful, tangible and concrete.” (Guidelines, page 20). Here, the final result of the claimed invention is the advertisement of information pertaining to the SBG on the WKG. The performed action is useful, tangible, and concrete.

Useful: For an invention to be “useful” it must satisfy the utility requirement of section 101. The USPTO’s official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP § 2107 and *Fisher*, 421

F.3d, 76 USPQ2d at 1230. Here, the utility of the claimed invention is specific, substantial, and credible. It is specific because it aims at a specific task of allowing mobile devices to discover nearby hosts and applications for impromptu interactions. It is substantial because it solves a significant problem in WiFi networks. It is credible because it provides a novel technique using methods that may be verified or confirmed by persons skilled in the art such as ad-hoc groups, interaction protocols, etc.

Tangible: The tangible requirement does require that the claim must recite more than a §101 judicial exception, in that the process claim must set forth a practical application of that §101 judicial exception to produce a real-world result. In other words, the opposite meaning of “tangible” is “abstract.” Here, the claimed invention produces a real-world result because the performed action results in information pertaining to the SBG being advertised on the WKG. It does not represent an abstract idea such as democracy, freedom, or capitalism.

Concrete: The “concrete” requirement means that the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. The opposite of “concrete” is unrepeatable or unpredictable. Here, the claimed invention is substantially repeatable and predictable. As long as there are unrelated mobile users, the result of providing the user interactions is substantially repeatable and predictable.

In summary, the claimed invention satisfies all the statutory requirements under 35 U.S.C. § 101 as provided by the Guidelines.

### ***Rejection Under 35 U.S.C. § 102***

In the Office Action, the Examiner rejected claims 1-6, 14-19, and 27-30 under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. 2004/0133689 A1 issued to Vasisht et al. ("Vasisht"). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of anticipation.

Vasisht discloses method, system and device for automatically configuring a communications network. Improvements in configuring node devices for networking include a Zero Configuration Utility for WiFi that gives users a list of available WiFi networks. If the networks are broadcasting their SSID and do not have encryption, the user can log on to the network by simply accepting a network in the Zero Configuration Utility interface. (Vasisht, par.

[0018]). In the case of a network using 802.11 b, at minimum a Service Set Identifier (or SSID) is required on each 802.11 b-equipped router (Vasisht, par. [0013]).

Vasisht does not disclose, either expressly or inherently, at least one of: (1) creating a session-based ad-hoc group (SBG) within a well-known ad-hoc group (WKG) for impromptu interactions among unrelated mobile users, the WKG having a WKG network configuration and a set of WKG interaction protocols, the SBG having SBG network configuration and a set of SBG interaction protocols; and (2) advertising information pertaining to the SBG on the WKG, as recited in independent claims 1 and 14, and (3) a well-known ad-hoc group (WKG) for impromptu interactions among unrelated mobile users, the WKG having a WKG network configuration and a set of WKG interaction protocols; and (4) a session-based ad-hoc group (SBG) within the WKG to allow a user to interact with other mobile users, the SBG having SBG network configuration and a set of SBG interaction protocols, the SBG advertising information pertaining to the SBG on the WKG, as recited in independent claim 27.

Vasisht merely discloses improvements in configuring node devices for networking (Vasisht, par. [0018]), not “creating a session-based ad-hoc group (SBG) within a well-known ad-hoc group (WKG) for impromptu interactions among unrelated mobile users”, as recited in the claims. The improvements include a Zero Configuration Utility for WiFi that gives users a list of available WiFi networks (Vasisht, par. [0018]). The Examiner alleges a selected WiFi network is the same as “a session-based ad-hoc group (SBG) within a well-known ad-hoc group (WKG) for impromptu interactions among unrelated mobile users” (Office Action, page 3, par. 3a). Applicant respectfully disagrees.

The WiFi networks which appear on the list are merely available WiFi networks, which may or may not require authentication or an encryption key, and the user may select one of the networks on the list in order to log his computer onto that selected network (Vasisht, par. [0018]). In contrast, a SBG is created within the WKG and is typically a group created by users for a specific purpose that is limited in term of lifetime, membership, or applications that it supports. The SBG may be created to avoid the noisy WiFi frequency used by the WKG or to provide a private session for security reasons or to avoid processing data from other devices (See Specification, par. [0024]-[0027], for further details). Since the WiFi network cannot be equivalent to the SBG, there is no teaching or suggestion of “a session-based ad-hoc group

(SBG) within the WKG to allow a user to interact with other mobile users”, as provided in the claims.

In addition, Vasisht merely discloses a Service Set Identifier (or SSID) being required on each 802.11 b-equipped router (Vasisht, par. [0013]), not “advertising information pertaining to the SBG on the WKG”, as recited in the claims. As discussed above, the available WiFi networks are not equivalent to the SBG, such that the SSID of a WiFi network cannot be the “information pertaining to the SBG”.

Furthermore, even if the WiFi networks were equivalent to the SBG, the SSID is not “an access method for joining the restricted SBG”, as recited in the claims, because SSID is used only to allow a user to log on “should the network require authentication or an encryption key” (Vasisht, par. [0018]). Logging on is merely to log on to use the WiFi networks, but not to join a group. Moreover, the WiFi networks as disclosed by Vasisht do not have open and restricted groups, therefore, logging on merely allows user to log on a WiFi network, not to join the group which requires a membership to be granted. To clarify this aspect of the invention, claims 1, 14, and 27 have been amended.

To anticipate a claim, the reference must teach every element of a claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Vergegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the...claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989). Since the Examiner failed to show that Vasisht teaches or discloses any one of the above elements, the rejection under 35 U.S.C. §102 is improper.

The Examiner bears the burden of presenting at least a *prima facie* case of anticipation. *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-139 (Fed. Cir. 1986); *In re Wilder*, 429 F.2d 447, 450, 166 USPQ 545, 548 (CCPA 1970). Only if that burden is met, does the burden of going forward shift to the applicant. *In re King*, 801 F.2d at 1327, 231 USPQ at 138-139; *In re Wilder*, 429 F.2d at 450, 166 USPQ at 548. Once a *prima facie* case is established and rebuttal evidence is submitted, the ultimate question becomes whether, based on the totality of the record, the Examiner carried his burden of proof by a preponderance. See *In re Oetiker*, 977 F.2d 1443,

1445. 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If the Examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Therefore, Applicant believes that independent claims 1, 14, and 27 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §102(e) be withdrawn.

### ***Rejection Under 35 U.S.C. § 103***

In the Office Action, the Examiner rejected claims 7, 12-13, 20, and 25-26 under 35 U.S.C. §103(a) as being unpatentable over Vasisht and further in view of U.S. Patent No. 7,284,062 B2 issued to Krantz et al. ("Krantz"), and Feeney et al. (Communications Magazine, IEEE, June 2001, p. 176-181 or p.1-12 per Applicant's disclosed NPL) ("Feeney"); and claims 8-11 under 35 U.S.C. §103(a) as being unpatentable over Vasisht and further in view of Feeney. Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP* §2143, p. 2100-126 to 2100-130 (8th Ed., Rev. 5, August 2006). Applicant respectfully submits that there is no suggestion or motivation to combine their teachings, and thus no *prima facie* case of obviousness has been established.

Furthermore, the Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated: "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." *MPEP* 2141. In *KSR International Co. vs. Teleflex, Inc.*, 127 S.Ct. 1727 (2007) (Kennedy, J.), the Court explained that "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands

known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” The Court further required that an explicit analysis for this reason must be made.

“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR 127 S.Ct.* at 1741, quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). In the instant case, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and there is no apparent reason to combine the known elements in the manner as claimed, and thus no *prima facie* case of obviousness has been established.

Vasisht discloses method, system and device for automatically configuring a communications network as discussed above.

Krantz discloses increasing the level of automation when provisioning a computer system to access a network. Data routing device is a device capable of grouping computer systems together in a single broadcast domain (Krantz, col. 12, lines 27-31).

Feeney discloses spontaneous networking: an application-oriented approach to ad-hoc networking. An ad hoc network provides administrative services and supports functionalities including address allocation, name resolution, service location, authentication, and access control policies (Feeney, Abstract).

Vasisht, Krantz, and Feeney, taken alone or in any combination, do not disclose or render obvious (1) creating a session-based ad-hoc group (SBG) within a well-known ad-hoc group (WKG) for impromptu interactions among unrelated mobile users, the WKG having a WKG network configuration and a set of WKG interaction protocols, the SBG having SBG network configuration and a set of SBG interaction protocols; and (2) advertising information pertaining to the SBG on the WKG, as recited in independent claims 1 and 14, and (3) a well-known ad-hoc group (WKG) for impromptu interactions among unrelated mobile users, the WKG having a WKG network configuration and a set of WKG interaction protocols; and (4) a session-based ad-hoc group (SBG) within the WKG to allow a user to interact with other mobile users, the SBG having SBG network configuration and a set of SBG interaction protocols, the SBG advertising



information pertaining to the SBG on the WKG, as recited in independent claim 27; and (5) selecting an advertising node according to a criteria within the SBG; (6) collecting information on the SBG; (7) periodically joining the WKG to broadcast the SBG information and to collect information on the WKG or a nearby SBG; and (8) returning to the SBG to advertise the information collected on the WKG to SBG members, as recited in claims 7 and 20.

As discussed above, Vasisht does not disclose or render obvious elements (1)-(4) as recited in independent claims 1, 14, and 27. Accordingly, a combination of Vasisht with any other references in rejecting claims dependent thereon is improper.

Furthermore, Krantz merely discloses a data routing device being a device capable of grouping computer systems together in a single broadcast domain (Krantz, col. 12, lines 27-31) and Feeney merely discloses an ad hoc network providing administrative services and supporting functionalities including address allocation, name resolution, service location, authentication, and access control policies (Feeney, Abstract).

The Examiner alleges that it would have been obvious to modify Vasisht's functions of using WEP/802.11 in configuring a user network with limit access with Feeney's functions of establishing ad hoc network without pre-established or central network management and Krantz's functions of using a data routing device to group computer systems. Applicant respectfully disagrees.

Claims 7 and 20 recite "selecting an advertising node according to a criteria within the SBG; collecting information on the SBG; periodically joining the WKG to broadcast the SBG information and to collect information on the WKG or a nearby SBG; and returning to the SBG to advertise the information collected on the WKG to SBG members".

As provided above, the WiFi networks in Vasisht are not the same as SBG. In addition, none of the functionalities including address allocation, name resolution, service location, authentication, and access control policies, as provided in Feeney, involve at least "collecting information on the WKG... and advertise the information collected on the WKG to SBG members" as recited in the claims. Furthermore, Krantz merely discloses a data routing device which does not disclose either a WKG or a SBG, let alone any of the elements as delineated in claims 7 and 20.

Applicant respectfully submits that for the Examiner to conclude that the elements as recited in claims 7 and 20 are disclosed by a combination of Vasisht's list of available WiFi networks which may require a WEP key to log on, Feeney's list of functionalities such as address allocation to be supported by an ad hoc network, and Krantz's teaching of a mere router, is a leap of logic.

The Examiner failed to establish a prima facie case of obviousness and failed to show there is teaching, suggestion, or motivation to combine the references. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) The claimed invention must be considered as a whole; (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) Reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986). "When determining the patentability of a claimed invention which combined two known elements, 'the question is whether there is something in the prior art as a whole suggest the desirability, and thus the obviousness, of making the combination.'" *In re Beattie*, 974 F.2d 1309, 1312 (Fed. Cir. 1992), 24 USPQ2d 1040; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ (BNA) 481, 488 (Fed. Cir. 1984). To defeat patentability based on obviousness, the suggestion to make the new product having the claimed characteristics must come from the prior art, not from the hindsight knowledge of the invention. *Interconnect Planning Corp. v. Feil*, 744 F.2d 1132, 1143, 227 USPQ (BNA) 543, 551 (Fed. Cir. 1985). To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the Examiner to show a motivation to combine the references that create the case of obviousness. In other words, the Examiner must show reasons that a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the prior elements from the cited prior references for combination in the manner claimed. *In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1996), 47 USPQ 2d (BNA) 1453. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or implicitly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan

would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973. (Bd.Pat.App.&Inter. 1985). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." *In re Mills*, 916 F.2d at 682, 16 USPQ2d at 1432; *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992), 23 USPQ2d 1780.

Moreover, the Examiner failed to establish the factual inquires in the three-pronged test as required by the *Graham* factual inquires. There are significant differences between the cited references and the claimed invention as discussed above. Furthermore, the Examiner has not made an explicit analysis on the apparent reason to combine the known elements in the fashion in the claimed invention. Accordingly, there is no apparent reason to combine the teachings of Vasisht, Krantz, and Feeney in any combination.

In the present invention, the cited references do not expressly or implicitly disclose any of the above elements. In addition, the Examiner failed to present a convincing line of reasoning as to why a combination of Vasisht, Krantz, and Feeney is an obvious application of "discovering nearby hosts and applications for impromptu interactions using well-known ad-hoc network configuration", or an explicit analysis on the apparent reason to combine Vasisht, Krantz, and Feeney in the manner as claimed.

Therefore, Applicant believes that independent claims 1, 14, and 27 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §103(a) be withdrawn.

***Conclusion***

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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